Warm Up #11-1

1. Find the equation of the tangent at the given point, then find the point where the tangent intersects the curve again.

$y = 2x^3 - 5x + 1$, at $x = 1$

2. Find the equation of the tangent at x = -1, then find the point where the tangent intersects the x -axis.

$y = 2x^3 + 3x^2 - x + 4$

HW Questions:

20E p 578 #1

a) $y - 16 = 8(x - 4)$

b) $y + 8 = 12(x + 2)$

c) $y + 3 = -3(x + 1)$

d) $y - \frac{1}{2} = -\frac{3}{4}(x - 2)$

e) $y - 2 = 7(x - 1)$

f) $y - 1 = -3(x + 2)$

g) $y = 2x$

h) Slope is undef. and $y = x^2 + \frac{1}{x}$ is undef. @ $x = 0$, so no tangent there.

i) $y - 3 = \frac{1}{2}(x - 2)$

j) $y + 5 = -3(x + 1)$

$y = \frac{x^2 + 4}{x} \rightarrow y = x + 4x^{-1}$

@ $x = -1$ $\quad y' = 1 - \frac{4}{x^2}$

$(-1, -5)$ $\quad m_t = 1 - \frac{4}{(-1)^2}$

$m_t = -3$

1d) $y = 4x^{-3}$ @ $x=2 \rightarrow y = \frac{4}{2^3} = \frac{1}{2}$ $\left(2, \frac{1}{2}\right)$

$y' = -12x^{-4}$

$y' = -\frac{12}{x^4}$

$y'(2) = -\frac{12}{2^4}$

$= -\frac{12}{16}$

$= -\frac{3}{4}$

$y - \frac{1}{2} = -\frac{3}{4}(x-2)$

Classwork: Tangents & Normals

(Blue worksheet)

HW: Review for tomorrow's quiz

Calculus: Rev. Set 20A

p. 582, # 1 - 8

Conditional Probability:

Rev. Set 9B p. 297, # 5b

Rev. Set 9C p. 298, # 3